

CLAIM AMENDMENTS

Claims 1 through 3 (canceled)

1 4. (Currently amended) A composition for treating crude
2 oils to improve flow and to facilitate extraction from oil wells,
3 which comprises:

4 (a) 20 to 30% by volume of a phenolic oil which is a
5 distillation fraction having a distillation temperature range from
6 170 to 190°C;

7 (b) 20 to 40% by volume of an absorption oil, which is a
8 distillation fraction having a distillation temperature range from
9 250 to 270°C;

10 (c) 20 to 40% by volume of a polymerization oil which is
11 a distillation fraction having a distillation temperature range
12 from 320 to 350°C; and

13 (d) balance of the composition up to 100% by volume of a
14 mixture of chemical additives containing a surfactant, a gas
15 generator, an acidic substance, and a solvent, the density of the
16 composition being ~~110 to 112~~ 1.10 to 1.12 g/cm³.

1 5. (previously presented) The composition for treating
2 crude oil defined in claim 4 wherein the volumetric ratio of the
3 phenolic oil, the absorption oil, and the polymerization oil is
4 1:1:1.

1 6. (previously presented) The composition for treating
2 crude oil defined in claim 4 wherein the phenolic oil comprises
3 cresols, naphthalenes, and anthracenes with various chemical
4 radicals attached thereto and having a density of 1.15 to 1.20
5 g/cm³; the absorption oil comprises phenanthrene, fluorene,
6 carbosols, and fluoranthrene and having a density of 1.19 to 1.22
7 g/cm³, and the polymerization oil comprises pyrene, acenaphthenes,
8 and chrysenes, and having a density of 1.20 to 1.23 g/cm³.

1 7. (previously presented) The composition for treating
2 crude oil defined in claim 4 wherein the mixture of chemical
3 additives consists of 25% by weight of a surfactant, 10% by weight
4 of a gas generating substance, which are decomposed at a
5 temperature less than 70°C causing the generation of gases, 15% by
6 weight of an acidic substance, and the balance solvent to 100%.

1 8. (currently amended) The composition for treating
2 crude oil defined in claim 4 which comprises 30% by volume of a
3 phenolic oil, 30% by volume of an absorption oil, 20% by volume of
4 a polymerization oil, and 20% by volume of a mixture of chemical
5 additives comprising 10% by weight of ammonium carbonate, [[35%]]

6 25% by weight of nonylphenol ethoxylated with 5 to 9 ethoxy groups,
7 15% by weight of phenol, and the balance a solvent up to 100%.

1 9. (currently amended) A process for treating crude oils
2 to improve flow and to facilitate extraction from an oil well by
3 preventing formation of deposits clogging oil derricks used in the
4 extraction of the crude oils, which comprises the steps of:

5 (i) injecting a composition which comprises

6 (a) 20 to 30% by volume of a phenolic oil which is a
7 distillation fraction having a distillation temperature range from
8 170 to 190°C;

9 (b) 20 to 40% by volume of an absorption oil, which is a
10 distillation fraction having a distillation temperature range from
11 250 to 270°C;

12 (c) 20 to 40% by volume of a polymerization oil which is
13 a distillation fraction having a distillation temperature range
14 from 320 to 350°C; and

15 (d) balance of the composition up to 100% by volume of a
16 mixture of chemical additives containing a surfactant, a gas
17 generator, an acidic substance, and a solvent, the density of the
18 composition being ~~1.10 to 1.12~~ 1.10 to 1.12 g/cm³;

19 under pressure into a tubing or through a production casing for
20 crude oil extraction through the oil well;

21 (ii) ceasing fluid extraction from the oil well through
22 the tubing or the production casing into which the composition
23 according to step (i) has been injected, for a period of 4 to 8
24 hours, to penetrate and open up the oil well; and

25 (iii) following step (ii), resuming extraction of crude
26 oil from the oil well.

1 10. (previously presented) The process for treating crude
2 oils defined in claim 9 wherein an effective amount of the
3 composition to prevent clogging of the oil derricks is injected
4 according to step (i) to ensure a distribution of 5m³ of
5 solution/meter through a perforated portion of the tubing portion.

1 11. (currently amended) A process for treating crude
2 oils to facilitate crude oil extraction from an oil well by
3 preventing formation of deposits clogging lines leading from oil
4 derricks used in the extraction of the crude oils, which comprises
5 the steps of:

6 (i) injecting a composition which comprises

7 (a) 20 to 30% by volume of a phenolic oil which is a
8 distillation fraction having a distillation temperature range from
9 170 to 190°C;

(b) 20 to 40% by volume of an absorption oil, which is a distillation fraction having a distillation temperature range from 250 to 270°C;

(c) 20 to 40% by volume of a polymerization oil which is a distillation fraction having a distillation temperature range from 320 to 350°C; and

(d) balance of the composition up to 100% by volume of a mixture of chemical additives containing a surfactant, a gas generator, an acidic substance, and a solvent, the density of the composition being ~~1.10 to 1.12~~ 1.10 to 1.12 g/cm³, through a line for conveying the crude oil, extracted from an oil well, and in the case of a line whose flow there through is blocked, employing a maximum pressure value which is limited by the pressure that the tubing can withstand;

(ii) maintaining the pressure within the line for a period of 4 to 8 hours; and

(iii) following step (ii), resuming the flow of crude oil through the line from the oil well.

1 12. (previously presented) The process for treating crude
2 oils defined in claim 9 wherein following steps (ii) and (iii), if
3 the crude oil extraction has not returned to a sufficient level,
4 again injecting the composition according to step (i) into the
5 tubing or through the production casing.

1 13. (previously presented) The process for treating crude
2 oils defined in claim 11 wherein following steps (ii) and (iii), if
3 the crude oil flow through the line has not returned to a
4 sufficient level, again injecting the composition according to step
5 (i) into the line for conveying the crude oil.